

REMARKS

Claims 1, 2, 5, 6, and 8 are pending in this application. By this Amendment, claims 1 and 5 are amended, and claim 4 is canceled. Claim 8 is withdrawn from consideration as being directed to a non-elected invention.

I. Rejection of Claims under 35 U.S.C. §103

Claims 1, 2 and 4-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sotomura (US 2003/0091889) in view of Cooper (USPN 5,316,990).

Sotomura is alleged to disclose all the features of these claims except "providing a potential higher than 1.3 V or 1.6V or less with reference to a standard hydrogen electrode." Cooper is relied upon as allegedly disclosing this feature at col. 3, lines 14-17, col. 4, lines 28-32, 41 and 42, and col. 5, lines 13-15, 31, and 36.

While not conceding the appropriateness of the rejection, but merely to advance prosecution of the instant application, claim 4 is canceled and independent claim 1 is amended to delineate, *inter alia*:

..., wherein
in the precursor layer forming step, a pre-formed metal complex is used as the catalyst in the coating liquid and is applied as is to form the precursor layer, and
in the potential providing step, the precursor layer is provided with the potential by potential sweeping, which is performed in an oxygen-saturated aqueous sulfuric acid solution.

Further, claim 5 is amended to depend from claim 1.

Using a pre-formed metal complex as the catalyst is based on, for example, Applicants' claim 4. Further, pre-fabrication of the metal complex is based on, for example, Examples 3-5 of Applicants' application, which are described at paragraphs [0080] to [0085] of Applicants' application. Performing potential sweeping in an oxygen-saturated aqueous sulfuric acid solution is based on, for example, paragraph [0078] of Applicants' application.

Sotomura discloses a technology for polymerizing a phthalocyanine in a liquid by potential sweeping. In Sotomura, as a phthalocyanine, one "having a polymerizable substitute such as an amino group or aminophenyl group" is used, and the phthalocyanine is polymerized via the amino group, etc. (paragraphs [0054] and [0059] of Sotomura).

In comparison with this, the invention delineated in independent claim 1 includes applying the metal complex as is to form the precursor layer and subsequently improving the quality of the metal complex by potential sweeping. Thus, claim 1 clearly differs from the method disclosed in Sotomura. Estimating the potential needed when improving the quality of a metal complex from the potential needed for the polymerization reaction disclosed in Sotomura would not have been obvious to a person of ordinary skill in the art.

Further, performing the potential sweeping in an oxygen-saturated aqueous sulfuric acid solution, and obtaining the effects thereby would not have been obvious from Cooper, in which quality is improved in 100% phosphoric acid at high temperature, and Sotomura, in which potential sweeping is performed in an alkaline atmosphere. Therefore, independent claim 1 is patentable over Sotomura and Cooper, considered alone or in combination.

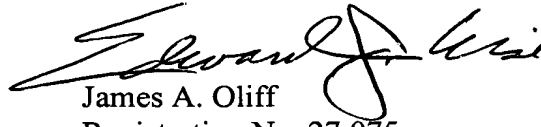
Because claims 2, 5, and 6 directly or indirectly depend from independent claim 1, they are patentable over Sotomura and Cooper for at least the reason(s) discussed above, as well as for the additional features they recite. Therefore, reconsideration of the rejection and allowance of claims 1, 2, 5, and 6 are respectfully solicited.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


James A. Oliff
Registration No. 27,075

Edward J. Wise
Registration No. 34,523

JAO:EXW/nlp

Attachments:

Petition for Extension of Time
Request for Continued Examination

Date: December 2, 2010

OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

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